

sixth abdominal segments, these light patches often extending to the subspiracular area; the subspiracular area is darker than above with the triangular patches as in preceding stage; wart on fifth abdominal segment small, usually orange, posterior to which and anteriorly on sixth segment is the dark transverse patch of preceding stage extending down between the prolegs; this dark patch is always well pronounced, ranging in color from brown in the light forms to almost black in the darker forms; tubercles ochreous to orange; tubercle II of eighth abdominal segment prominent, with a dark crescent behind; ventral surface whitish with dark brown contiguous patches; prolegs whitish, conspicuous, with dark lateral lines; no filaments. Length, full grown, 42 to 45 mm.

*Food plant.*—Various kinds of Huckleberry (*Vaccinium* spp.).

(*To be continued.*)

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## DISTRIBUTIONAL RECORDS OF AQUATIC HEMIPTERA.

BY J. R. DE LA TORRE-BUENO, White Plains, N. Y.

Collectors and students of Hemiptera, while more numerous now than ten years ago, are still but too few; and the published distribution of the Heteroptera is still far too fragmentary to base generalizations upon. The records here given are from specimens in the Cornell University collection, and fill gaps in the distribution, not only in New York, but also in the United States at large. For convenience, the arrangement is according to Van Duzee's *Catalogue*:

*Mesovelia bisignata* Uhler—Ithaca, N. Y.

*Gerris conformis* Uhler—Ithaca, N. Y.

*Gerris marginatus* Say—NEW YORK: Ithaca, Old Forge, Adirondack Mts.; MICHIGAN: Walnut Lake.

*Gerris buenoi* Kirkaldy—Ithaca, N. Y.; Lake Forest, Ills. These two States are not given by Van Duzee.

*Gerris canaliculatus* Say—Knoxville, Tenn. Another record additional.

*Gerris rufoscutellatus* Latreille—NEW YORK: Ithaca, Enfield Falls, Old Forge; CALIFORNIA: Mt. Diablo, Fresno Co.,

Palo Alto; Lake Forest, Ills. California is the most Western record for the species; not given by Van Duzee. *Metrobates hesperius* Uhler—NEW YORK: Ithaca, Adirondack Mts.; Knoxville, Tenn. The Tennessee record is not in Van Duzee.

*Trepobates pictus* H. S.—Ithaca, N. Y.; Knoxville, Tenn.

*Halobates micans* Eschsch.—Lat. 23° 58' N., long. 81° 8' W. (Between Florida and Cuba.)

*Microvelia americana* Uhler—Saranac Lake, N. Y.

*Rhagovelia obesa* Uhler—Ithaca, N. Y.

*Notonecta irrorata* Uhler—NEW YORK: Ithaca, Spencer Summit; Wellington, Ohio; North Carolina. The last State does not appear in Van Duzee.

*Ranatra protensa* Montandon—Ithaca, N. Y.

*Ranatra americana* Montandon—Columbia, Mo. A record not in Van Duzee.

It may be noted that the arrangement of families in the water bugs, according to Van Duzee's Catalogue, does not seem to me to show the true relationship of the groups. It is too discrete. Likewise, it may be noted that *Ranatra grisea* Bueno MS. is a strict synonym of *R. protensa* Mont. In fact, all the records given under *Ranatra* in the Catalogue are uncertain, owing to erroneous synonymy, following Montandon. These are the correct synonymies according to our present knowledge:

*Ranatra fusca* P. B. = *nigra* H. S.

*R. americana* Mont. = *quadridentata* Uhler and American authors, not Stål = *quadrinotata* Van Duzee (as a synonym) lapsus calami.

*R. protensa* Mont. = *grisea* Bueno MS.

*R. kirkaldyi* Bueno is not a synonym of *fusca* P. B., but a very distinct species, easily separable by striking structural characters from all our other species, and, in fact, from almost all other species of the genus.